

Applicant: Kazuhiko Tsuda, et al.
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Response to Final Office Action
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REMARKS

Applicants appreciate the Examiner's thorough examination of the subject application and request reconsideration of the subject application based on the foregoing amendments and the following remarks.

Claims 27-66 are pending in the subject application.

Claims 1-26 are withdrawn from consideration as the result of an Examiner's earlier restriction requirement. In view of the Examiner's earlier restriction requirement, Applicants reserves the right to present the above-identified withdrawn claims in a divisional application. As also indicated in the Office Action mailed July 22, 2004, a complete reply to a final rejection must include cancellation of the withdrawn claims.

Claims 27, 28, 30-41, 44, 45 and 47-66 stand rejected under 35 U.S.C. §102.

Claims 29, 42, 43 and 46 were objected to as depending from a rejected base claim; however, the Examiner indicated that the claims would be allowable if appropriately re-written in independent form.

Claims 1-26 were canceled in the instant amendment without prejudice to prosecuting them in a continuing/divisional application.

Claims 27, 51 and 54 were amended to more distinctly claim the present invention. More specifically, each of claims 27, 51 and 54 were amended to clarify that the whole screen is scanned in the scanning period.

Claim 29 was re-written in independent form and so as to include the limitations of the base claim (claim 27) and the intervening claim (claim 28).

Claim 42 was re-written in independent form and so as to include the limitations of the base claim (claim 27) but not the limitations of the intervening claim (claim 40).

Claim 43 was amended so this claim now depends from claim 42.

Claim 46 was re-written in independent form and so as to include the limitations of the base claim (claim 44) and the auxiliary capacitance feature of intervening claim 45 to avoid possible antecedent basis concerns. Claim 46 also was amended so as to replace the reference to the driving method of claim 40, with particular method language as set forth in claims 27 and 40.

The foregoing amendments to the claims have not been necessitated by the need to distinguish the present invention from any prior art. It is respectfully submitted that the amendments to the claims are supported by the originally filed disclosure and that no new matter has been introduced by these amendments, as support therefore is found throughout the specification and drawings. It also is respectfully submitted that the amendments to the claims do not require further search and consideration and thus, entry of these amendments into the subject application is respectfully requested.

35 U.S.C. §102 REJECTIONS

The Examiner rejected claims 27, 28, 30-41, 44, 45 and 47-66 under 35 U.S.C. §102(e) as being anticipated by Yamazaki [USP 6,522,319]. Applicants respectfully traverse as discussed below. Because claims were amended in the instant amendment, the following discussion refers to the language of the amended claims. However, only those amended features specifically relied

upon to distinguish the claimed invention from the cited prior art shall be considered as being made to overcome the cited reference.

The above-referenced Office Action asserts that Yamazaki discloses *inter alia*, a method of driving a display device which displays by selecting and scanning each signal line of a screen having pixels arranged in matrix form and further, that a quiescent period, in which all of the scanning lines are set in non-scanning state, is set to be longer than a scanning period required for scanning the screen one time. Applicants respectfully disagree with this characterization of what is asserted as being disclosed and taught in Yamazaki.

Yamazaki does not disclose a method of driving a display device that displays by selecting and scanning each signal line of a screen having pixels arranged therein. There are two driving methods described in Yamazaki - partial screen display and full screen display. Both of the described methods or techniques embody what is clearly described in Yamazaki as a 4MLS (Multi-Line Selection) method that "simultaneously selects four lines of scanning electrodes and performs simultaneous selection sequentially on a basis of 4-line scanning electrodes" (col. 17, lines 10-16). Thus, and as illustrated in Fig. 3, appropriate scanning signal voltages are simultaneously applied to 4 scanning electrodes in the same time interval and this is repeated for each successive group of 4 scanning electrodes.

Yamazaki teaches that when this method is applied to a screen that is divided into non-display and display regions, the above 4MLS technique is applied to the electrodes in the display region. This is accomplished because a partial display control signal PD in the Yamazaki device is set so as to be at a high level when the electrodes in the display region of the screen are being

selected. Yamazaki also describes that upon completion of the selection of these electrodes/lines in the display region (*i.e.*, the 40 electrodes referred to in Yamazaki), the partial display control signal PD is set low. It is further indicated in Yamazaki that as a result of the input of the low level partial control signal PD to a control terminal as that of the Y driver, *all* of the 200 scanning electrodes lines become fixed at the non-selection voltage level VC in a non-display access period of 40H of the 50H of one field.

It would appear that the Examiner is suggesting that the 10H period in which electrodes Y1 to Y40 are scanned corresponds to the claimed scanning period required for scanning the screen, and that the 40H period in which there is no scanning corresponds to the claimed quiescent period. Applicants would note that the 10H period corresponds to the time required to scan 1/5 of the screen (*i.e.*, 40 of 200 lines) and thus does not meet the limitations in the claimed invention that the “period required for scanning the screen one time,” (*i.e.*, 200 lines in the screen of Yamazaki).

As indicated above, Yamazaki also describes a method/ technique in which the full screen is used for display. The discussion in Yamazaki when the liquid crystal display panel is in the full-screen display mode, clearly indicates that the partial data display signal PD is at the high level and the data latch signal LP is continuously feed to sequentially select the scanning electrodes Y1 to Y200 in the unit of four lines (col. 20, line 65-col. 21, line 5). In other words, in the full screen mode, the method simultaneously selects four lines of scanning electrodes and performs simultaneous selection sequentially on a basis of 4-line scanning electrodes for all the scanning electrodes of the screen.

In sum, Yamazaki does not disclose selecting and scanning each scanning signal line of a screen. Instead, Yamazaki discloses selecting and scanning *groups* of scanning signal electrodes (e.g., groups of 4 electrodes). In the case where a screen is specifically divided into display and non-display regions, Yamazaki also discloses scanning of all electrodes at the same time and at a fixed voltage level, after completion of the selection of the signal electrodes/ lines of the display region.

It necessarily follows that it also cannot be said that the 40H period shown in Figure 3 of Yamazaki corresponds to a non-scanning state or a quiescent period as those terms are used in the subject application. As indicated above, when a screen is arranged in Yamazaki so as to be in a full screen display mode using the 4MLS technique (i.e., capable of selecting and scanning all the scanning electrodes of the screen), then Fig. 3 would have shown that the sequential selection and scanning process for all 200 electrodes would extend across the entire 50H period (i.e., 200 lines/40 lines per 10H = 50H).

Notwithstanding the foregoing, and in the interests of advancing prosecution, claims 27, 51, and 54, were amended to specifically indicate and to clarify that the whole screen is scanned in the scanning period. In other words, the claim 27 was amended, and claims 51 and 54 similarly amended, to provide that:

setting a quiescent period, in which all the scanning signal lines are set in non-scanning state, to be longer than a scanning period required for scanning each scanning signal line of the screen at least one time, wherein a sum of the scanning period and the quiescent period is set to be equivalent to one vertical period

The disclosures of the device in Yamazaki does not describe nor teach a device that meets or satisfies the foregoing limitation. In the full screen display state, Yamazaki does not disclose nor teach a quiescent period that is longer than the scanning period. Further, in the partial display state, Yamazaki does not disclose nor teach scanning each scanning signal line of the screen at least one time.

In this regard, Applicants would further note that, even if the non-scanning time of Yamazaki's partial display and the scanning time of Yamazaki's full screen display are considered, the result still would fail to describe or teach a quiescent period longer than the scanning period. Further, the result would fail to describe or teach that a sum of the scanning period and the quiescent period is set so to be equivalent to one vertical period.

In the above-referenced Office Action, it is indicated that "the embodiment of Yamazaki wherein parts of the display are displayed in units; reads on the claims. It is respectfully submitted that, while Yamazaki describes selecting a number of lines simultaneously in a unit (*e.g.*, see col. 7, lines 52-57 thereof), this does not overcome the above-described defects regarding the disclosures and teachings in Yamazaki.

It is respectfully submitted that each of the claims that depend from claims 27, 51 and 54, 59, 61, 63 and 64 are considered to be patentable over Yamazaki at least because each depends from a base claim that is considered to be allowable. This, however, is not an admission that the dependent claims are not themselves separately patentable over Yamazaki.

It is respectfully submitted that the foregoing remarks to claims 27, 51 and 54 also at least apply to distinguish each of claims 59, 61, 63 and 64, as well as the claims that depend

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therefrom, over Yamazaki. This, however, is not an admission that this is the sole basis upon which these claims are patentable over Yamazaki.

As provided in MPEP-2131, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Or stated another way, "The identical invention must be shown in as complete detail as is contained in the ... claims. *Richardson v Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ 2d. 1913, 1920 (Fed. Cir. 1989). Although identify of terminology is not required, the elements must be arranged as required by the claim. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990). It is clear from the foregoing remarks that the above identified claims are not anticipated by the cited reference.

It is respectfully submitted that for the foregoing reasons, claims 27, 28, 30-41, 44, 45 and 47-66 are patentable over the cited reference and satisfy the requirements of 35 U.S.C. §102(e). As such, these claims, including the claims dependent therefrom are allowable.

CLAIMS 29, 42, 43, 46

In the above-referenced Office Action, claims 29, 42, 43 and 46 were objected to as being dependent upon a rejected base claim. It also was provided in the above-referenced Office Action, however, that these claims would be allowable if rewritten in independent form to include all the limitations of the base claim and any intervening claim(s).

Claim 29 was re-written in independent form and so as to include the limitations of the base claim (claim 27) and the intervening claim (claim 28). Applicants thus respectfully submit that claim 29 as amended is considered to be patentable over Yamazaki.

Claim 42 was written in the foregoing amendment so as to be in independent form and to include all the limitations of the base claim (claim 27). This claim was not amended, however, so as to include the limitations of the intervening claim(s); claim 40. Notwithstanding this, Applicants respectfully submit that claim 42, as amended, is considered to be patentable over Yamazaki.

As to claim 43, this claim was not re-written in independent form as suggested by the Examiner. Instead claim 43 was amended so that this claim now depends from claim 42. Applicants however, reserve the right to later amend the subject application so as to present pending claim 43 (*i.e.*, claim 43 pre-amended) in independent form or to add one or more independent claims that contain the limitations of pending claim 43.

Claim 46 was re-written in independent form and so as to include the limitations of the base claim (claim 44) and the auxiliary capacitance feature of intervening claim 45 to avoid possible antecedent basis concerns. Claim 46 also was amended so as to replace the reference to the driving method of claim 40, with particular method language as set forth in claims 27 and 40. Notwithstanding this, Applicants respectfully submit that claim 46 is considered to be patentable over Yamazaki.

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Applicants, reserve the right to later amend the subject application so as to add one or more independent claims that contain all of the limitations of any one or more of claims 29, 42, 43 and 46 and the related base and any intervening claims. .

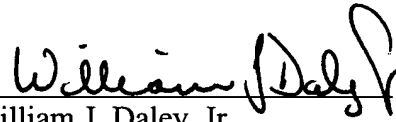
It is respectfully submitted that the subject application is in a condition for allowance.
Early and favorable action is requested.

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Applicants believe that additional fees are not required for consideration of the within Response. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, the Commissioner is hereby authorized and requested to charge Deposit Account No. **04-1105**.

Respectfully submitted,
Edwards & Angell, LLP

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